

To: File
From: Michael Jensen, DOE GC-71
Date: July 27, 2010
Re: Ex parte discussion with T.R. Arnold & Associates, Inc.

On July 27, 2010, Michael Jensen (GC-71), Harry Indig (EE-2J), Bob Lucas (PNL), and Dave Conover (PNL) spoke with Robert Tanger, President of T.R. Arnold & Associates, Inc. (TRA), on his company's role as both a production inspection primary inspection agency (IPIA) and as a design approval primary inspection agency (DAPIA) under the U.S. Department of Housing and Urban Development (HUD) manufactured housing program.

First, Mr. Tanger explained that TRA conducts three different levels of IPIA-related inspections of manufactured homes and that manufacturers have the capability of issuing certification labels in ninety percent of TRA's inspections. Mr. Tanger noted that manufacturers would not experience much of an increase in inspection fees if TRA were to take on the additional responsibility of ensuring compliance with DOE's energy efficiency standards because TRA already inspects for energy efficiency measures and inspects modular homes for compliance with the International Energy Conservation Code (IECC) in a number of states that have adopted the IECC. However, he mentioned that any additional fees for DOE plan review and inspection, as compared to the current HUD regulations for energy, would be the administrative costs to report to DOE. Mr. Tanger stated his clients are in the eastern United States, the southern states, including Alabama, and northern states, including Pennsylvania. He commented that, in many ways, his business is no different from a typical site-built code official department.

Mr. Tanger also noted that TRA seldom conducts onsite inspections of manufactured homes and does so only then in conjunction with a consumer complaint or via an SAA request. However, Mr. Tanger stated that TRA conducts onsite reviews of homes under HUD's process of allowing alternative construction. Mr. Tanger estimated that the cost for onsite inspections is \$350 per home or inspection visit, on average. Mr. Tanger also noted that most manufacturers build modular homes and that the production of modular homes had increased in recent years.

Mr. Tanger mentioned that, under the ENERGY STAR program, two percent of homes are inspected at the home site and that such inspections include blower door and duct blaster tests. He estimated that twenty-five percent of manufactured homes from his client base are ENERGY STAR compliant and that manufacturers that choose to build ENERGY STAR compliant homes typically devote the entire operations of a plant to building such homes. Mr. Tanger estimated that the cost for ENERGY STAR-related tests is in the range of \$500 to \$800 per house. Mr. Tanger guessed that most current manufactured homes regulated under the HUD program would meet the energy efficiency requirements found in the 2003 (or possibly the 2006) version of the IECC. Mr. Tanger also estimated that eighty percent of manufactured homes his company inspects are built with 2x6 walls with R-19 or R-21 insulation, including homes built at plants located in warm climates. Mr. Tanger further noted that the manufactured homes

that TRA inspectors generally use blanket systems in the floor and that considerable compression occurred with the blanket systems (although noting that batt systems are used in homes designed to be installed over basements, which are becoming more popular) and that homes with window U-values of 0.35 to 0.27 were common in northern climates.

Mr. Tanger also stated that TRA interacts with IBTS on a regular basis, but not as frequently in recent years. Mr. Tanger also noted that TRA staff receives training from IBTS, HUD, and State Administrative Agencies.

End of conversation.